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(83)

Amended Claims

1. A device to eliminate trimmings or scraps (Rft, Rfc) from series of products (R), comprising:

- 5 • a path (12) for the products, extending from a product and trimming entry position and a product delivery position, the trimmings being removed between said two positions;
- along said path, a movable flexible member (3) to retain and move the products and the trimmings and an opposite longitudinal fixed element (13)
- 10 to retain said trimmings (R) extending along said path parallel to a first branch of said flexible member, at a distance from it to allow the products to advance in contact with said flexible member and with said fixed longitudinal element;
- at least a pusher (15) movable along a feed trajectory, to feed the series of
- 15 products with the respective trimmings to said path (12), said pusher being arranged to feed the products and the trimmings between said flexible member and said fixed longitudinal element

characterized in that: the feed trajectory of the pusher intersects the path of the products between said flexible member (3) and said fixed longitudinal

20 element (13), overlapping in the final stretch the path of the products in contact with said flexible member and said fixed longitudinal element; and said at least one pusher (15) has a slot (15C) inside which said fixed longitudinal element penetrates during the movement with which the pusher feeds the series of products to said path between the flexible member and the

25 fixed longitudinal element.

2. Device as claimed in claim 1, characterized in that said products are rolls of wound web material and said trimmings are head and tail trimmings produced by cutting rolls or logs (R).

3. Device as claimed in claim 1 or 2, characterized in that said

30 fixed longitudinal element is at a lower height than said flexible member.

4. Device as claimed in at least claim 3, characterized in that said first branch of the flexible member is approximately vertically overlapping said fixed longitudinal element.

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5. Device as claimed in at least claims 2 and 4, characterized in that the distance between the fixed longitudinal element (13) and the first branch of the flexible member (3) is substantially equal to the diameter of the rolls.

5 6. Device as claimed in one or more of the preceding claims, characterized in that said flexible member extends upstream of said fixed longitudinal element, in relation to the direction of feed of the products (R).

7. Device as claimed in one or more of the preceding claims, characterized in that said flexible member has a feed speed, along said path, greater than the feed speed imparted on the products by said at least one pusher.

8. Device as claimed in one or more of the preceding claims, characterized in that the distance between the flexible member and the fixed longitudinal element is adjustable.

15 9. Device as claimed in one or more of the preceding claims, characterized in that said flexible member defines two adjacent supporting areas for each of said products, said areas being parallel to the direction of feed of said products.

10. Device as claimed in one or more of the preceding claims, characterized in that said flexible member comprises at least a belt.

11. Device as claimed in claims 9 and 10, characterized in that said belt has two parallel lips (3A, 3B) defining said two adjacent supporting lines for the products.

12. Device as claimed in claims 9 and 10, characterized in that said flexible member comprises two parallel belts, each forming one of the two supporting lines.

13. Device as claimed in claim 12, characterized in that said two parallel belts are positioned symmetrically in relation to a vertical plane parallel to said fixed longitudinal element.

14. Device as claimed in one or more of the preceding claims, characterized in that said at least one pusher is carried by a second flexible member (17), driven around a wheel (20) positioned under said path between the flexible member (3) and the fixed longitudinal element (13), the second flexible member defining a closed path along which said at least one pusher is

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made to advance.

15. Device as claimed in claim 14, characterized in that a channel (11) is positioned upstream of said fixed longitudinal element to feed the products pushed by said at least one pusher (15).

5        16. Device as claimed in one or more of the preceding claims, characterized in that said fixed longitudinal element is produced in synthetic material with a low friction coefficient.

17. Device as claimed in claim 16, characterized in that said fixed longitudinal element is produced in polytetrafluoroethylene (Teflon).

10        18. Device as claimed in one or more of the preceding claims, characterized in that said fixed longitudinal element has a laminar extension, with a rounded surface (13S) in contact with the products.

15        19. Device as claimed in claim 18, characterized in that said fixed longitudinal element has a reduced height in proximity to the product entry position.

20. Device as claimed in one or more of the preceding claims, characterized in that in the first stretch, in proximity to the product feed area, said fixed longitudinal element has a rounded form (13A) to allow travel of said at least one pusher.

20        21. A cutting machine to cut logs or rolls (L) of web material in rolls (R), comprising a cutting tool (U) and means to feed the rolls (R), characterized in that it comprises a device to eliminate trimmings (Rfc, Rft) as claimed in one or more of the preceding claims.